Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A junction field-effect transistor comprising:

a first conductivity type semiconductor layer having a substantially flat cross-sectional shape and having a channel region;

a buffer layer of either a first conductivity type or undoped ~~semi-conductive type~~, formed on said channel region in the first conductivity type semiconductor layer, the buffer layer having a substantially flat cross-sectional shape; and

a second conductivity type doped region ~~formed to reach~~ extending into the first conductivity type semiconductor layer to a top surface of the buffer layer, but not extending through the buffer layer, ~~and in the first conductivity type semiconductor layer on said buffer layer,~~

wherein a first conductivity type carrier concentration in said buffer layer is lower than a first conductivity type carrier concentration in said first conductivity type semiconductor layer.

2. (Previously presented) The junction field effect transistor according to claim 1, wherein said first conductivity type carrier concentration in said buffer layer is not more than one tenth of said first conductivity type carrier concentration in said first conductivity type semiconductor layer.

3. (Previously presented) The junction field-effect transistor according to claim 1, wherein said first conductivity type semiconductor layer is composed of silicon carbide.

4. (Previously presented) The junction field-effect transistor according to claim 1, further comprising another second conductivity type doped region formed under said channel region.

5. (Currently amended) The junction field-effect transistor according to claim 1, further comprising:

another buffer layer [[on]] of the first conductivity type, formed under the channel region; and

another second conductivity type doped region formed to reach the other buffer layer, and formed in another first conductivity type semiconductor layer formed under the other buffer layer,

wherein a first conductivity type carrier concentration in said other buffer layer is lower than the first conductivity type carrier concentration in said first conductivity type semiconductor layer.

6. (Previously presented) The junction field-effect transistor according to claim 5, wherein said first conductivity type carrier concentration in said another buffer layer is not more than one tenth of said first conductivity type carrier concentration in said first conductivity type semiconductor layer.

7. (Previously presented) The junction field-effect transistor according to claim 1, further comprising a semiconductor substrate composed of n-type silicon carbide, wherein

said first conductivity type semiconductor layer is formed on one main surface of said semiconductor substrate.

8. (Previously presented) The junction field-effect transistor according to claim 7, further comprising:

a gate electrode formed on the surface of said second conductivity type doped region,

an electrode, either a source electrode or a drain electrode, formed on the surface of said first conductivity type semiconductor layer, and

another electrode, either a drain electrode or a source electrode, formed on another main surface of said semiconductor substrate.

9. (Previously presented) The junction field-effect transistor according to claim 7, further comprising:

a gate electrode formed on the surface of said second conductivity type doped region, and

a source electrode and a drain electrode formed on the surface of said first conductivity type semiconductor layer.

10. (Currently amended) A junction field-effect transistor comprising:

a first conductivity type semiconductor layer having a substantially flat cross-sectional shape and having a channel region,

a buffer layer of a second conductivity type formed on the channel region in the first conductivity type semiconductor layer, the buffer layer having a substantially flat cross-sectional shape, and

a second conductivity type doped region formed ~~to reach~~ extending into the first conductivity type semiconductor layer to a top surface of the buffer layer, but not extending through the buffer layer, ~~and in the first conductivity type semiconductor layer on the buffer layer,~~

wherein a second conductivity type carrier concentration in the buffer layer is lower than a first conductivity type carrier concentration in the first conductivity type semiconductor layer.

11. (Previously presented) The junction field-effect transistor according to claim 10 wherein the first conductivity type semiconductor layer is composed of silicon carbide.

12. (Previously presented) The junction field-effect transistor according to claim 10 further comprising another second conductivity type doped region under the channel region.

13. (Currently amended) The junction field-effect transistor ~~according to claim~~ according to claim 10 further comprising:

another buffer layer of the first conductivity type under the channel region, and

another second conductivity type doped region that reaches the other buffer layer and is in another first conductivity type semiconductor layer under the other buffer layer,

wherein a first conductivity type carrier concentration in the other buffer layer is lower than a first conductivity type carrier concentration in the first conductivity type semiconductor layer.

14. (Currently amended) The junction field-effect transistor ~~according to claim~~ according to claim 13 where the first conductivity type carrier concentration in the other buffer layer is not more than one tenth of the first conductivity type carrier concentration in the first conductivity semiconductor layer.

15. (Currently amended) The junction field-effect transistor ~~according to claim~~ according to claim 10 further comprising a semiconductor substrate composed of n-type silicon carbide,

wherein the first conductivity type semiconductor layer is formed on one main surface of the semiconductor substrate.

16. (Currently amended) The junction field-effect transistor ~~according to claim~~ according to claim 15 further comprising:

a gate electrode on the surface of the second conductivity type doped region,

an electrode, either a source electrode or a drain electrode, on the surface of the first conductivity type semiconductor layer, and

another electrode, either a drain electrode or a source electrode, on another main surface of the semiconductor substrate.

17. (Currently amended) The junction field-effect transistor ~~according to claim~~ according to claim 15 further comprising:

a gate electrode on the surface of the second conductivity type doped region, and

a source electrode and a drain electrode on the surface of the first conductivity type semiconductor layer.

18. (New) The junction field-effect transistor according to claim 1 wherein the second conductivity type doped region does not extend into the buffer layer.

19. (New) The junction field-effect transistor according to claim 10 wherein the second conductivity type doped region does not extend into the buffer layer.